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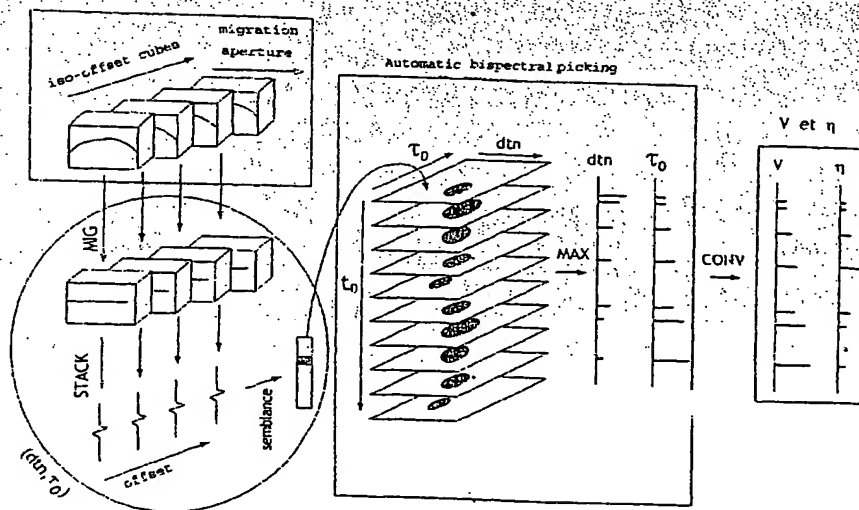
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- (71) Applicant (for all designated States except US): **COMPAGNIE GENERALE DE GEOPHYSIQUE [FR/FR];**  
**1, rue Louis Migaux, F-91300 Massy (FR).**
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **SILIQI, Risto**  
**[FR/FR]; 29, rue Saint-André des Arts, F-75006 Paris**  
**(FR).**
- (74) Agents: **CALLON DE LAMARCK, Jean-Robert et al.;**  
**Cabinet Régimbeau, 20, rue de Chazelles, F-75847 Paris**  
**Cédex 17 (FR).**
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(54) Title: **METHOD FOR BISPECTRAL PICKING OF ANELLIPTICAL NMO CORRECTION PARAMETERS**



(57) Abstract: Method of determining the velocity  $V$  and anellipticity  $\eta$  parameters for processing seismic traces in a common midpoint (CMP) gather comprising: - a preliminary step to define a plurality of nodes  $(dt_n, \tau_0)$  - for each node  $(dt_n, \tau_0)$  defined in the preliminary step, the following steps: - for static NMO correction of traces in the CMP gather as a function of the values of the said parameters  $dt_n$  and  $\tau_0$  at the node considered, and calculation of the semblance function associated with the said NMO correction for the node considered; and - for each picked time  $t_0$ , a step including determination of the maximum semblance node  $(dt_n(t_0), \tau_0(t_0))$  - and a final step to convert the  $dt_n(t_0)$  and  $\tau_0(t_0)$  parameters, so as to obtain the velocity  $(t_0)$  and anellipticity  $\eta(t_0)$  laws.